COYLE ENVIRONMENTAL LTD.

Natura Impact Statement Report for Proposed Development at Cullagh More, Carney, Co. Sligo.

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Coyle ENVIRONMENTAL

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	Name	Date	Position
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1. Introduction

1.1. Requirement for an Appropriate Assessment

In April 2015 Coyle Environmental Ltd was appointed on behalf of Harold Barber to provide the necessary information to allow the competent authority (in this case Sligo County Council) to conduct an Article 6 (3) Appropriate Assessment for a proposed development at Cullagh More. This information is being submitted as a Natura Impact Statement (NIS).

In Ireland, an Appropriate Assessment takes the form of a Natura Impact Statement (NIS), which is a statement of the likely impacts of the plan or project on a Natura 2000 site. The NIS comprises an assessment of the plan or project and it examines the direct and indirect impacts that the plan or project might have on its own or in combination with other plans or projects on one or more Natura 2000 sites in view of the sites' conservation objectives.

1.2. The Aim of the Report

This Natura Impact Statement (NIS) has been prepared in accordance with the current guidance (DoEHLG, 2009, Revised February 2010).

The purpose of this NIS is to provide the information required to establish whether a proposed development is likely to have a significant impact on certain Natura sites in the context of their conservation objectives and specifically on the habitats and species for which the Natura 2000 conservation sites have been designated.

2. Regulatory Context

2.1. Relevant Legislation

The EU Habitats Directive (92/43/EEC) provides legal protection for habitats and species of European importance. It sets up the Natura 2000 network, a European network of important ecological sites comprising of Special Areas of Conservation (SACs) designated under Member States under this directive and Special Protection Areas (SPAs) classified under the Birds Directive (Directive2009/147/EC).

The Birds Directive seeks to conserve all wild birds, protecting birds, their eggs, nests and habitats. The Directive (Directive2009/147/EC) requires that Member States take measures to classify the most suitable areas as Special Protection Areas (SPAs) for the conversation of bird species listed in Annex 1 of the Directive. SPAs are selected for threatened and migratory bird species (listed in Annex I of the Birds Directive). SPA areas are of international importance for these migratory birds.

The EU Habitats Directive (92/43/EEC) also requires that protection is given to sites (Special Areas of Conservation) which are made up of, or support, particular habitats and species listed in annexes to this Directive.

To protect this network, Articles 6(3) and 6(4) of this Directive also call for the undertaking of an Appropriate Assessment on any plan or project, not directly connected or necessary for the management of which is likely to have a significant effect on any European designated sites in view of the conservation objectives.

Articles 6(3) and 6(4) of the Habitats Directive sets out the decision-making tests for plans or projects affecting Natura 2000 sites. Article 6(3) establishes the requirement for Appropriate Assessment:

"Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."

Article 6(4) deals with the steps that should be taken when it is determined, as a result of appropriate assessment, that a plan/project will adversely affect a European site. Issues dealing with alternative solutions, imperative reasons of overriding public interest and compensatory measures need to be addressed in this case.

Article 6(4) states:

"If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission to other imperative reasons of overriding public interest."

The Water Framework Directive (WFD) (2000/60/EC) aims to ensure that Member States achieve water quality at least *Good Status* in rivers, lakes, groundwater, estuaries and coastal waters by 2027 and that status does not deteriorate in any waters. The WFD was transposed into Irish law by the European Communities (Water Policy) Regulations 2003 (S.I. 722 of 2003). Water quality

must be protected and highly impacts species diversity as such it is an important factor to consider in Appropriate Assessment.

3. Methodology

3.1. Appropriate Assessment

This AA has been prepared with reference to the following:

- European Commission (2018). Managing Natura 2000 Sites: The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.
- European Commission (2021). Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC.
- European Commission (2006). Nature and Biodiversity Cases: Ruling of the European Court of Justice.
- European Commission (2007). Clarification of the Concepts of: Alternative Solution, Imperative Reasons of Overriding Public Interest, Compensatory Measures, Overall Coherence, Opinion of the Commission.
- Department of Environment, Heritage and Local Government (2009). Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities.
- Office of the Planning Regulator (2021). Appropriate Assessment Screening for Development Management.
- NPWS (2019). The Status of EU Protected Habitats and Species in Ireland.
- CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.2. Chartered Institute of Ecology and Environmental Management, Winchester.

In complying with the obligations set out in Articles 6(3) and following the guidelines described above, this screening statement has been structured as a stage-by-stage approach as follows:

- Description of the proposed project.
- Identification of the Natura 2000 sites close to the proposed development.
- Identification and description of any individual and cumulative impacts on the Natura 2000 sites likely to result from the project.
- Assessment of the significance of the impacts identified above on the site integrity.
- Exclusion of sites where it can be objectively concluded that there will be no significant effects.

3.2. Statement of Competency

This NIS report was carried out by Catherine Howarth. Catherine is an Ecological Consultant at Coyle Environmental Ltd. She has a BSc (Honours) in Conservation Biology and Ecology from the University of Exeter and a Certificate in Ecological Consultancy. She is an Associate member of CIEEM (Chartered Institute of Ecology and Environmental Management). Catherine has over 17 years' experience in habitat monitoring and surveying.

3.3. Field Based Studies

The site at Cullagh More, Carney, Co. Sligo was visited by Catherine Howarth of Coyle Environmental Ltd on the 26th of March 2025 to conduct a Site Walkover when field notes and photographs were taken. Habitats within the application site were classified in accordance with Level 3 of *A Guide to Habitats in Ireland* (Fossitt, 2000). These habitats are denoted in the text along with their habitat code, e.g., the habitat code for improved agricultural grassland is GA1.

3.4. Desk Studies & Consultation

A desk study was carried out to collate information on European sites in the vicinity of the proposed development. The following data sources were accessed to complete a thorough examination of potential impacts prior to the completion of this statement:

- National Parks and Wildlife Service - Aerial photographs and maps of designated sites, information on habitats and species within these sites and information on protected plant or animal species, conservation objectives, site synopses and standard data forms for relevant designated sites.
- Environmental Protection Agency (EPA)- Information pertaining to water quality, geology and licensed facilities within the area;
- Myplan.ie – Mapped based information;
- National Biodiversity Data Centre (NBDC) – Information pertaining to protected plant and animal species within the study area;
- Google Street View – High quality aerials and street images;
- Simon Beale & Associates – Information regarding the proposed development including site plans and specifications and information on the Site.
- Sligo County Council – Information on planning history in the area for the assessment of cumulative impacts.

3.5. Assessment Methodology

The development was assessed to identify any potential ecological impacts and it's 'Zone of Influence' (ZoI). The ZoI of a proposed development is the geographical area over which it could affect the receiving environment in a manner that could have significant effects on the Qualifying Interests of a European site.

For significant effects to arise there must be a potential impact from a Source, i.e., a development, to a Receptor, i.e., a European site via an Ecological pathway e.g. a water course. If there is no ecological pathway or functional link between the proposed development and the European site, there is no potential for impact and the project can be screened out.

Based on the potential impacts and their ZoI, the Natura 2000 sites potentially at risk from direct, indirect or in-combination impacts were identified. The assessment considered all potential impact sources and pathways connecting the proposed development to Natura 2000 sites, in view of the conservation objectives supporting the favourable conservation condition of the site's Qualifying Interests (QIs) or Special Conservation Interests (SCIs).

The conservation objectives relating to each Natura 2000 site and its QIs/SCIs are cited generally for SACs as "to maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or Annex II species for which the SAC has been selected", and for SPAs "to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA".

The conservation status of a habitat is defined in Article 1 of the Directive. The conservation status of a natural habitat will be taken as favourable when:

- Its natural range and area it covers within that range is stable or increasing.
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future.
- The conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- The population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats.
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future.
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

A distance of 15km is a baseline used for plans with regard to ZoI according to CIEEM 2018 Guidance, however the ZoI will vary for different ecological features depending on their sensitivity to an environmental change, therefore this must be evaluated on a case-by-case basis with reference to the nature, size and location of the project, the sensitivities of the ecological receptors and the potential for in-combination effects. Where site-specific conservation objectives (SSCOs) have been prepared for a European site, these include a series of specific attributes and targets against which effects on conservation condition, or integrity, can be measured. Where potential significant effects are identified, then these SSCOs should be considered in detail.

4. Screening

4.1. Development Description

Harold Barber is applying to Sligo County Council for full planning permission or development consisting of the following for the construction of 69 no. residential units consisting of 9 No. two storey detached houses, 2 no. single storey semi-detached houses, 32 No. two storey semi-detached houses, 18 no. two-storey terraced houses & 8 no. Duplex houses providing for 10 no. one bedroom units, 8 no. 2 bedroom units, 26 no. 3 bedroom units and 25 no. 4 bedroom units on completion, together with the construction of new internal access roads, boundary treatments, public lighting, connection to all services and all ancillary site development works at Cullagh More, Carney, Co. Sligo. An extract from the Site Layout is shown in Figure 1.

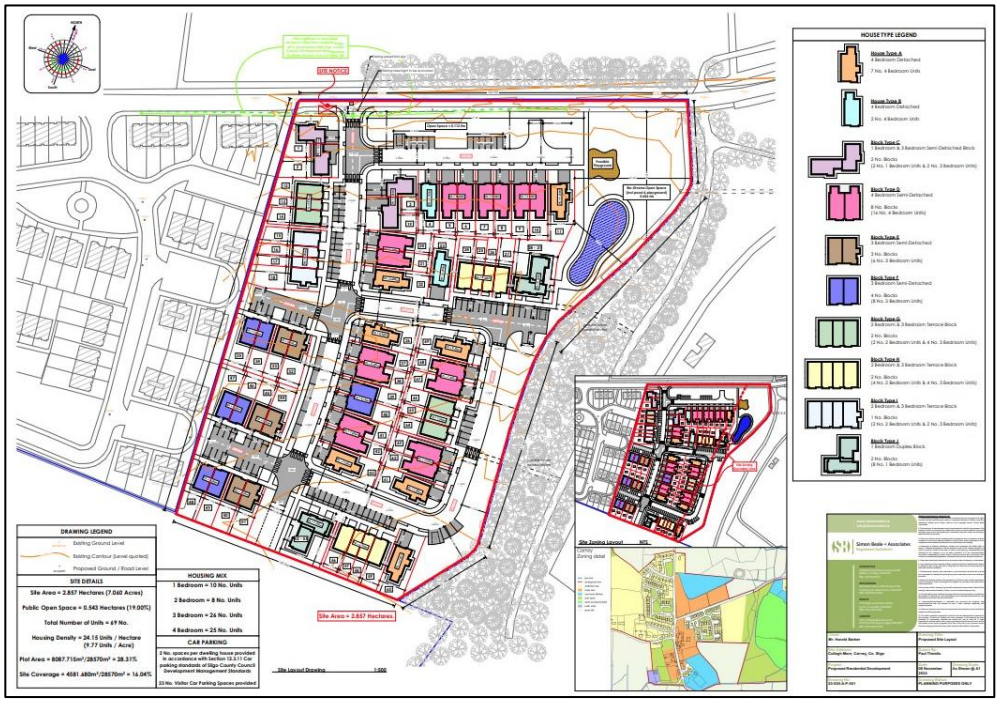

Figure 1 – Extract from Site layout (Simon Beale & Associates)

Wastewater and surface water

Connection to existing foul sewer line. Surface water is directed from permeable paving and housing to a Wavin Stormwater Attenuation storage tank via a proposed attenuation pond. The storage tank features a hydro brake and discharges to an existing surface water sewer pipe.

4.2. Site Location and Surrounding Environment

The site in question is approximately 2.76 hectares and is located in Cullagh More, Carney, Co. Sligo. The site is located 7km north-northwest of Sligo town on the L3402.

Surrounding land use is primarily agricultural fields, residential buildings and woodland. The landscape at and in the vicinity of the proposed works is rural in nature. The land use classification

within the site, as defined by the 2018 CORINE landcover dataset, is classified as 'Agricultural Areas' while the bedrock of the site is Ballyshannon Limestone and shale and sandstones till subsoil.

Site location maps are shown in Figures 2 and 3, whilst an aerial photograph of the site and its surrounding habitats are shown in Figures 4 and 5.

Figure 2 – Site Location Map with Site Pinned (NPWS)

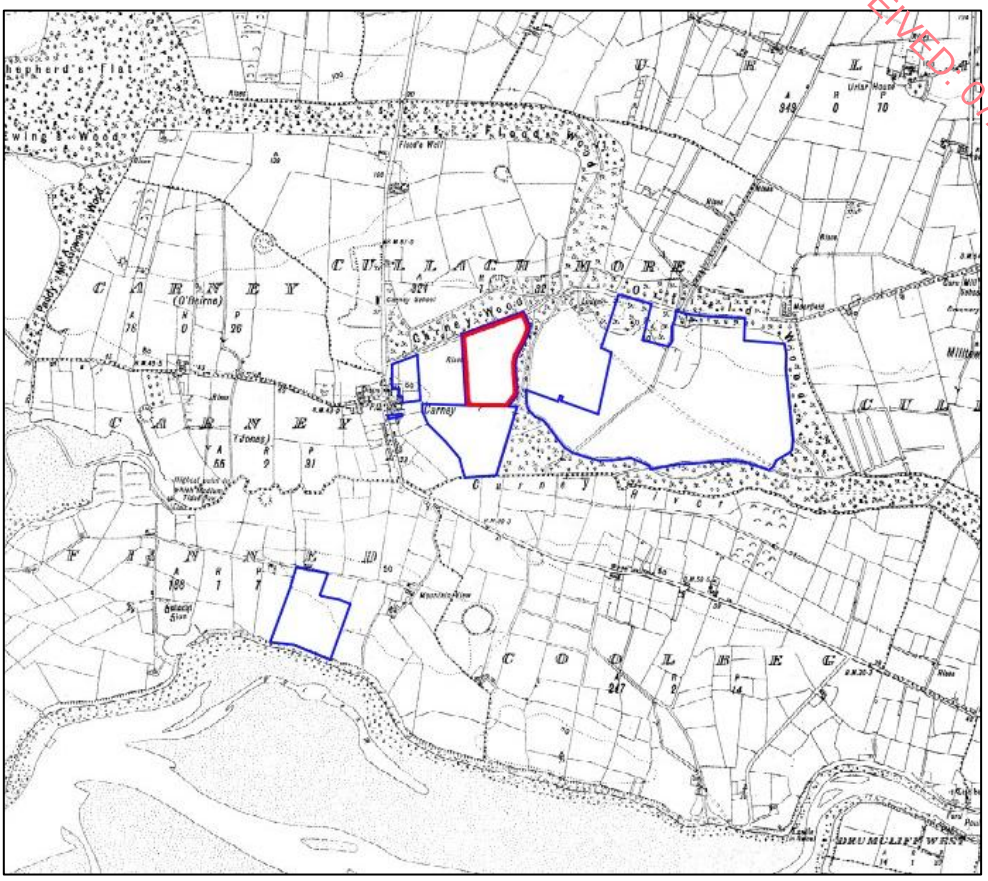

Figure 3 – Site Location Map with Site Outlined in Red (Simon Beale & Associates)

Figure 4 – Aerial Photograph with site marked in red and surrounding habitats

Figure 5 – Aerial Photograph of the Site

4.3. Habitats within the Site

No part of the development site lies within an area that has been designated for nature conservation purposes. The habitats within the site are described in greater detail below.

The main habitats on the site are 'Improved Agricultural Grassland' and 'Wet Grassland' (GA4). The north site boundary is a wire fence and has road frontage on the L3402. The east boundary is an earthen bank and treeline with an open ditch and separates the site from the Carney Village Walk footpath. The southern boundary is a post and wire fence with a hedgerow; and the west boundary is a treeline in front of a wooden fence separating the field from the adjacent housing estate.

All habitats within the development site were mapped and are shown on the accompanying habitat map in Figure 6.

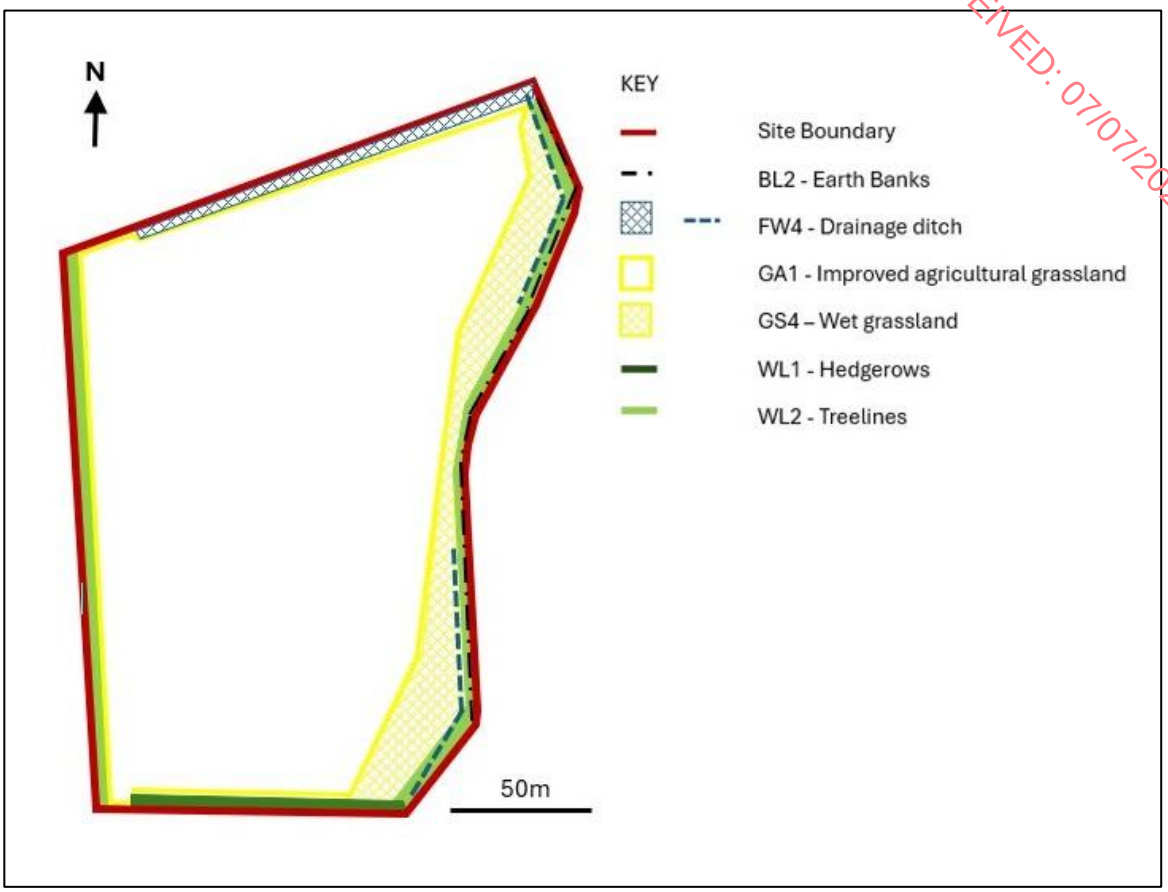

Figure 4 – Habitat Map with Fossitt codes and description.

4.4. Water Features and Quality

The application site is located within the Sligo Bay Catchment (35), and the Grange[Sligo] Sub-Catchment (35_3). The site is within the Grange East Groundwater Body and the status of this groundwater body is good. The closest watercourse is an open drain 40m east of the site, which flows into the Cullagh_Beg/ Doonowney_010 (IE_WE_35D120800),180m south of the site. The river water body status is good. There is moderate to high groundwater vulnerability, and the site is located on a Regionally important aquifer - karstified.

The Cullagh_Beg/ Doonowney_010 (IE_WE_35D120800), watercourse has direct hydrological connectivity to the Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC and Drumcliff Bay SPA 1.1km downstream.

4.5. Natura 2000 Sites Identified

In accordance with the guidelines issued by the Department of the Environment and Local Government, a list of Natura 2000 sites within 15km of the proposed development have been identified and described according to their site synopses, qualifying interests and conservation objectives. In addition, any other sites further than this, but potentially within its zone of interest were also considered. The zone of impact may be determined by an assessment of the

connectivity between the application site and the designated areas by virtue of hydrological connectivity, atmospheric emissions, flight paths, ecological corridors etc.

The proposed works are within 15km of eight SACs and seven SPAs that have been designated under the EU Habitats Directive and the EU Birds Directive. Maps and aerial photographs showing the locations of Natura 2000 sites relative to the application site are shown in Figures 7 and 8. These designated areas, their closest points to the development and QIs are outlined in Table 1. A full description of these sites can be read on the website of the National Parks and Wildlife Service (npws.ie).

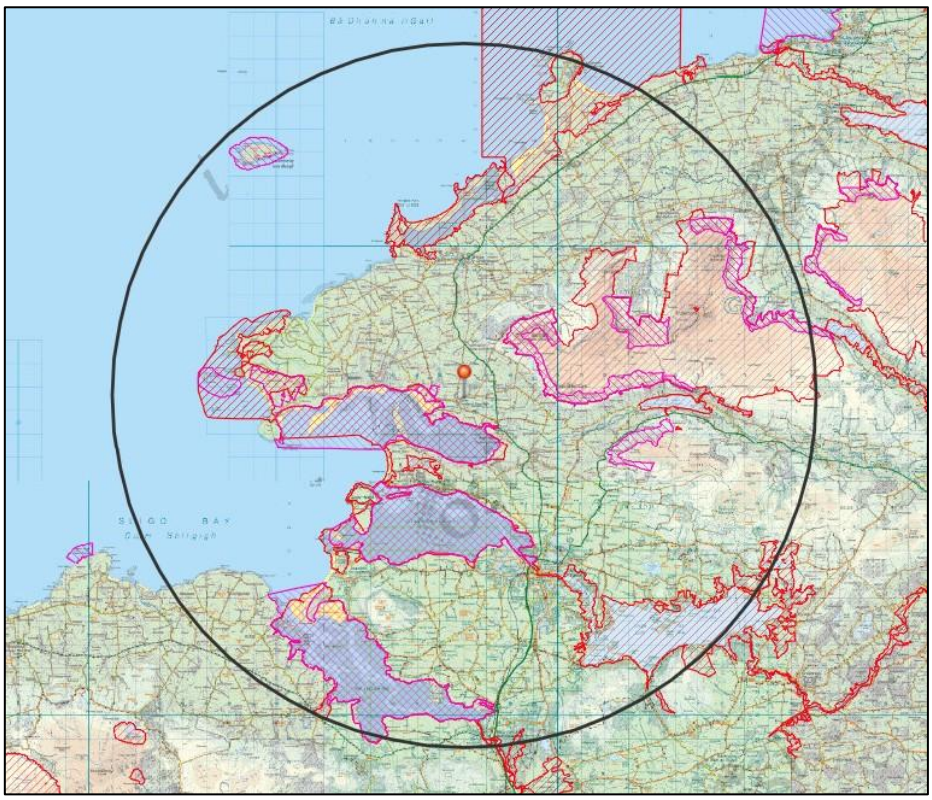

Figure 5 – The Application Site in relation to the Natura 2000 Sites within 15km (Red/Pink). (NPWS Maps)

Figure 6 – The Application Site in relation to SACs and SPAs (Red/Pink Hatching). (NPWS Maps)

Figure 7 - The hydrological connectivity is shown in blue from the application site in red and Natura 2000 sites in yellow/ orange (EPA Maps).

Table 1 – Natura 2000 sites within 15km of the site.

Site Name & Code	Distance	Qualifying Interests	Screened In / Out
Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC SAC 000627	0.85km	**Habitats** 1130 Estuaries 1140 Mudflats and sandflats not covered by seawater at low tide 2110 Embryonic shifting dunes 2120 Shifting dunes along the shoreline with Ammophila arenaria (white dunes) 2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)* 5130 Juniperus communis formations on heaths or calcareous grasslands 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) 7220 Petrifying springs with tufa formation (Cratoneurion)* **Species** 1014 Narrow-mouthed Whorl Snail *(Vertigo angustior)* 1095 Sea Lamprey *(Petromyzon marinus)* 1099 River Lamprey *(Lampetra fluviatilis)* 1365 Harbour Seal *(Phoca vitulina)*	**Screened In** – There is a direct hydrological link from the application site to the SAC and the potential for significant effects upon this SAC and its QIs arising from constructional and operational impacts cannot be ruled out and further assessment is required.
Ben Bulben, Gleniff and Glenade Complex SAC SAC 000623	2.93km	**Habitats** 3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation 4010 Northern Atlantic wet heaths with Erica tetralix 4030 European dry heaths 4060 Alpine and Boreal heaths 5130 Juniperus communis formations on heaths or calcareous grasslands 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) 6230 Species-rich Nardus	**Screened Out** - There is no hydrological or ecological connectivity between the application site and this SAC, and significant effects upon this SAC will not arise.

Site Name & Code	Distance	Qualifying Interests	Screened In / Out
		grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)* 6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels 7130 Blanket bogs (* if active bog) 7140 Transition mires and quaking bogs 7220 Petrifying springs with tufa formation (Cratoneurion)* 7230 Alkaline fens 8110 Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani) 8120 Calcareous and calcshist screes of the montane to alpine levels (Thlaspietea rotundifolii) 8210 Calcareous rocky slopes with chasmophytic vegetation **Species** 1013 Geyer's Whorl Snail *(Vertigo geyeri)* 1355 Otter *(Lutra lutra)*	
Streedagh Point Dunes SAC SAC 001680	6.09km	**Habitats** 1140 Mudflats and sandflats not covered by seawater at low tide 1220 Perennial vegetation of stony banks 1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae) 1410 Mediterranean salt meadows (Juncetalia maritimi) 2120 Shifting dunes along the shoreline with Ammophila arenaria (white dunes) 2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)* **Species** 1014 Narrow-mouthed Whorl Snail *(Vertigo angustior)*	**Screened Out** - There is no hydrological or ecological connectivity between the application site and this SAC, and significant effects upon this SAC will not arise.
Lough Gill SAC SAC 001976	8.07km	**Habitats** 3150 Natural eutrophic lakes with Magnopotamion or Hydrocharition -	**Screened Out** - There is no hydrological or ecological connectivity

Site Name & Code	Distance	Qualifying Interests	Screened In / Out
		type vegetation 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) 91A0 Old sessile oak woods with Ilex and Blechnum in the British Isles 91E0 Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)* **Species** 1092 White-clawed Crayfish *(Austropotamobius pallipes)* 1095 Sea Lamprey *(Petromyzon marinus)* 1096 Brook Lamprey *(Lampetra planeri)* 1099 River Lamprey *(Lampetra fluviatilis)* 1106 Salmon *(Salmo salar)* 1355 Otter *(Lutra lutra)*	between the application site and this SAC, and significant effects upon this SAC will not arise.
Bunduff Lough and Machair/Trawalua/Mullaghmore SAC SAC 000625	8.51km	**Habitats** 1140 Mudflats and sandflats not covered by seawater at low tide 1160 Large shallow inlets and bays 1170 Reefs 2120 Shifting dunes along the shoreline with Ammophila arenaria (white dunes) 2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)* 2190 Humid dune slacks 21A0 Machairs (* in Ireland) 5130 Juniperus communis formations on heaths or calcareous grasslands 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) 7230 Alkaline fens **Species**	**Screened Out** - There is no hydrological or ecological connectivity between the application site and this SAC, and significant effects upon this SAC will not arise.

Site Name & Code	Distance	Qualifying Interests	Screened In / Out
		1065 Marsh Fritillary *(Euphydryas aurinia)* 1351 Harbour Porpoise *(Phocoena phocoena)* 1395 Petalwort *(Petalophyllum ralfsii)*	
Ballysadare Bay SAC SAC 000622	9.88km	**Habitats** 1130 Estuaries 1140 Mudflats and sandflats not covered by seawater at low tide 2110 Embryonic shifting dunes 2120 Shifting dunes along the shoreline with Ammophila arenaria (white dunes) 2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)* 2190 Humid dune slacks **Species** 1014 Narrow-mouthed Whorl Snail *(Vertigo angustior)* 1365 Harbour Seal *(Phoca vitulina)*	**Screened Out** – The distances between the application site and this SAC are sufficient that significant effects upon this SAC will not arise.
Unshin River SAC SAC 001898	13.88km	**Habitats** 3260 Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) 6410 Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) 91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)** **Species** 1106 Salmon *(Salmo salar)* 1355 Otter *(Lutra lutra)*	**Screened Out** - There is no hydrological or ecological connectivity between the application site and this SAC, and significant effects upon this SAC will not arise
Union Wood SAC SAC 000638	14.28km	**Habitats** 91A0 Old sessile oak woods with Ilex and Blechnum in the British Isles	**Screened Out** - There is no hydrological or ecological connectivity between the

Site Name & Code	Distance	Qualifying Interests	Screened In / Out
			application site and this SAC, and significant effects upon this SAC will not arise.
Drumcliff Bay SPA SPA 004013	0.87km	**Birds** A144 Sanderling *(Calidris alba)* A157 Bar-tailed Godwit *(Limosa lapponica)* **Habitats** Wetlands	**Screened In** - There is a direct hydrological link from the application site to the SPA and the potential for significant effects upon this SPA and its QIs arising from constructional and operational impacts cannot be ruled out and further assessment is required.
Ballintemple and Ballygilgan SPA SPA 004234	1.19km	**Birds** A045 Barnacle Goose *(Branta leucopsis)*	**Screened Out-** Despite the proximity of the application site to this SPA, significant effects upon this SPA should not occur as there is no land take and significant effect on the Barnacle Geese that utilise the site will not arise.
Sligo/Leitrim Uplands SPA SPA 004187	2.93km	**Birds** A103 Peregrine (*Falco peregrinus*) A346 Chough (*Pyrrhocorax pyrrhocorax*)	**Screened Out** - There is no hydrological or ecological connectivity between the application site and this SPA, and significant effects upon this SPA will not arise
Cummeen Strand SPA SPA 004035	3.94km	**Birds** A046 Light-bellied Brent Goose *(Branta bernicla hrota)* A130 Oystercatcher *(Haematopus ostralegus)* A162 Redshank *(Tringa totanus)*	**Screened Out** - The distances between the application site and this SPA are sufficient that significant effects upon this SPA will not

Site Name & Code	Distance	Qualifying Interests	Screened In / Out
		Habitats Wetlands	arise, as there will be no habitat loss to the protected species of this site.
Ardboline Island and Horse Island SPA SPA 004135	9.54km	**Birds** A017 Cormorant *(Phalacrocorax carbo)* A045 Barnacle Goose *(Branta leucopsis)*	**Screened Out** - There is no hydrological or ecological connectivity between the application site and this SPA, and significant effects upon this SPA will not arise
Ballysadare Bay SPA SPA 004129	9.78km	**Birds** A046 Light-bellied Brent Goose (*Branta bernicla hrota*) A141 Grey Plover (*Pluvialis squatarola)* A149 Dunlin (*Calidris alpina*) A157 Bar-tailed Godwit (*Limosa lapponica*) A162 Redshank (*Tringa totanus*) **Habitats** Wetlands	**Screened Out** - There is no significant connectivity between the application site and this SPA, and negative effects upon this SPA will not arise
Inishmurray SPA SPA 004068	12.88km	**Birds** A018 Shag *(Phalacrocorax aristotelis)* A045 Barnacle Goose *(Branta leucopsis)* A184 Herring Gull *(Larus argentatus)* A194 Arctic Tern *(Sterna paradisaea)*	**Screened Out** - There is no hydrological or ecological connectivity between the application site and this SPA, and significant effects upon this SPA will not arise

4.6. Identification of Potential Impacts

The proposed development at Cullagh More is 1.1km upstream from Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC (000627) and Drumcliff Bay SPA (004013) In this regard the potential impacts regarding water quality, affecting these designated sites, given its proximity will be addressed in detail in Section 5.

There are no expected impacts from the proposed works on the other designated sites listed in Table 1 as there are no direct hydrological connection or the distance is deemed far enough away

that any disturbance emanating from the proposed works would be both temporary and on a negligible scale so as not to have an impact. Accordingly, these sites will not be discussed regarding potential impact.

The development is not directly connected with or necessary for the management of the designated site. In the absence of any mitigation, impacts upon these designated sites arising from the operation of this proposed development cannot be ruled out. Therefore, taking a conservative approach, in a worst-case scenario and in the absence of mitigation, an accidental pollution event of a sufficient magnitude during construction or operation, either alone or in-combination with other pollution sources, could potentially affect the surface water quality in these local watercourses to an extent that undermines the conservation objectives of certain qualifying interests of Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC and Drumcliff Bay SPA. A reduction in water quality locally has the potential to affect the aquatic habitats and natural conditions that are required to maintain or achieve the specific attributes and targets of the qualifying interests associated with Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC and Drumcliff Bay SPA and the conservation objectives that have been set for these QIs.

Therefore, following an evaluation of the relevant information including the characteristics of the proposed development and the likelihood of significant effects on the sites and with regards to the tenets of the precautionary principal, it is considered in the opinion of this author that, on the basis of objective information, it is not possible to exclude that the proposed development, either individually or in combination with other plans or projects, will have a likely significant effect on the above European sites.

Only those features of the development that have the potential to affect the integrity and conservation objectives of the identified Natura sites and protected species have been considered. Several factors were examined at this stage and dismissed or carried forward for Appropriate Assessment as relevant. The following areas were examined in relation to potential impacts and subsequent effects from the proposed development on the Natura 2000 sites identified:

- Deterioration of water quality in designated areas resulting from pollution from surface water run-off during site preparation and construction.
- Deterioration of habitat in designated areas during the operation of the site.
- Cumulative impacts with other proposed/existing developments.

4.7. Screening Conclusions

This section considers the list of sites identified in Section 3.3. It can be considered that all sites, except for Cummeen Strand / Drumcliff Bay (Sligo Bay) SAC and Drumcliff Bay SPA can be excluded from the remainder of the Appropriate Assessment process. This is based on their distance from the proposed development and the fact that it is outside of the Zone of Influence of these sites and that no impacts are likely to arise. The remaining concerns will therefore focus

upon the protected habitats and species of the Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC and Drumcliff Bay SPA.

The proposed development is not directly connected with or necessary to the nature conservation management of the designated site. Therefore, following consideration of the location of Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC and Drumcliff Bay SPA in relation to the proposed development at Cullagh More and the potential impacts that may occur, this project must proceed to the next stage of Appropriate Assessment, the Natura Impact Assessment.

5. Stage II – Natura Impact Statement

5.1. Introduction

The main objective of this stage (Stage 2, Natura Impact Statement) in the Appropriate Assessment process is to determine whether the development of the proposed planning application at Cullagh More (either alone or in combination with other plans, programmes and projects) will result in significant adverse impacts to the integrity of the Natura 2000 sites identified with respect to these site's structures, species, functions and/or conservation objectives. This stage also outlines the mitigation measures that should be taken to avoid any negative impacts of this application, should it receive consent.

5.2. Site Specific Conservation Objectives

For the sites that have been screened in the Site-Specific Conservation Objectives (SSCOs) were reviewed considering the proposed development and the potential impacts that might occur. These SSCOs aim to define the favourable conservation condition for the habitats or species at that site. They outline certain attributes such as distribution, population structure, water quality for different species and habitats with targets, which define favourable condition for a habitat or species at a particular site. The maintenance of habitats and species within the Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at national level. Where available, these SSCOs can be downloaded on the NPWS website. Any potential threats to the attributes and targets as defined in these SSCOs were assessed and where necessary, mitigated for.

For each Qualifying Interest of the Natura 2000 site, the specific conservation objective is either to *maintain or restore* the favourable conservation condition of that interest, by defining a list of attributes and targets which are indicative of the conservation status of that interest. For habitats, the main attributes include habitat area; habitat and community distribution; vegetation structure/composition and physical structure.

The main target is to ensure that the habitats are stable or increasing in area and that the other attributes are maintained or restored. For the Annex II species of the SAC, the main attributes are population trend and distribution, whilst the targets aim to ensure that the long-term population

trends of the species are stable or increasing and that there is no significant decrease in the numbers or range of areas used by the species, other than that occurring from natural patterns of variation.

5.3. Natura 2000 Sites Identified

A summary of the sites screened in is presented below. Full details of these sites are available on the website of the National Parks and Wildlife Service.

5.3.1. Cummeen Strand / Drumcliff Bay (Sligo Bay) SAC (000627)

This large coastal site extends from Cullamore in the north-west to Killaspug in the south-west, and from Sligo town in the south-east to Drumcliff village in the northeast. It encompasses two large, shallow bays, Drumcliff Bay and Sligo Harbour, and both Ardboline and Horse Island. Sand dunes and sand hills at Rosses Point, Killaspug, Yellow Strand and Coney Island are included, as are grasslands at Ballintemple and Ballygilgan (Lissadell), along with a variety of other habitats such as woodland, saltmarsh, sandy beaches, boulder beaches, shingle, fen, freshwater marshes, rocky sea cliffs and lakes.

The dominant habitats on the site are estuaries and intertidal sand and mud flats. Sligo Harbour receives the waters of the Garavogue River, which flows from Lough Gill, while Drumcliff Bay receives the Drumcliff River which flows from Glencar Lough. At low tide extensive areas of intertidal flats are exposed in both of these sheltered estuarine bays. The intertidal flats support a diverse macrofauna, with invertebrate species such as lugworm (*Arenicola marina*), common cockle (*Cerastoderma edule*), sand mason worm (*Lanice conchilega*), Baltic tellin (*Macoma balthica*), spire shell (*Hydrobia ulvae*) and common mussel (*Mytilus edulis*) being frequent. Of particular note is the presence of the eelgrasses *Zostera noltii* and *Z. angustifolia* beds in both bays. Areas of saltmarsh fringe both bays in places.

Sand dune habitats are rare and threatened in Europe and three types are found in this site - embryonic dunes, Marram (*Ammophila arenaria*) dunes and fixed dunes. Embryonic dunes, with characteristic species including Sand Couch (*Elymus farctus*), occur at the southern end of the sand spit at Rosses Point. Shifting Marram dunes are found in a number of locations, including Rosses Point, Strandhill, Coney Island and Yellow Strand. In the latter three areas, the areas of shifting dunes are linked at least to some extend to recent disturbance (e.g. erosion, storm breaches, etc.).

Both Drumcliff Bay and Cummeen Strand are important for the large numbers of waterfowl which use them in autumn/winter, including Ringed Plover, Redshank, Lapwing, Knot, Bar-tailed Godwit, Oystercatcher, Curlew, Golden Plover, Dunlin, Turnstone, Brent Goose, Grey Heron, Teal, Wigeon, Mallard, Shelduck and Redbreasted Merganser. The fields at Lissadell and Ballintemple support one of the largest populations of Barnacle Goose in the country (c. 2,000 in winters of 1995/96 and 1996/97). Both Drumcliff Bay and Cummeen Strand have been designated as Special Protection Areas under the E.U. Birds Directive. The important feeding site for Barnacle Goose at Lissadell is

a Statutory Nature Reserve. The islands in the north-western section of the site hold important seabird colonies.

At least five species listed on Annex II of the E.U. Habitats Directive are found within this site. Drumcliff Bay is important for the presence of a breeding population of Common Seal. Sea Lamprey and River Lamprey have been recorded in the Garavogue River, and River Lamprey are also known from further upstream in the tributaries of Lough Gill. The Marsh Fritillary butterfly is found at Rosses Point, while the rare snail *Vertigo angustior* has recently been recorded from sand dunes at Killaspugbrone.

Cummeen Strand/Drumcliff Bay (Sligo Bay) is an important site of high conservation significance, which includes a wide variety of habitat types, including several listed on Annex I of the E.U. Habitats Directive, several species listed on Annex II of this Directive, large and important populations of waterfowl and seabirds, and several rare plant species

In 2024, the NPWS published Site Specific Conservation Objectives (SSCOs) for the Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC. These SSCOs can be downloaded on the NPWS website. Any potential threats to the attributes and targets as defined in these SSCOs were assessed and where necessary, mitigated for.

5.3.2 Drumcliff Bay SPA (004013)

Drumcliff Bay, Co. Sligo is the most northerly of Sligo Bay's three estuarine inlets. The bay comprises an inner area of sheltered estuarine habitat and an outer area of shallow seawater. It extends 9 km east to west from Drumcliff village to Raghly Point. Drumcliff Bay is the estuary of the Drumcliff River, a substantial river flowing from Glencar Lough to the east. The inner part of Drumcliff Bay is sheltered by a sandy/grassy peninsula extending north from Rosses Point. The northern part of the bay is fringed by fine sandy beaches - Ballygilgan Strand, Lissadell Strand and Ardtermon Strand. Salt marsh occurs in the most sheltered areas and at low tide, extensive inter-tidal flats are exposed. A bed of Dwarf Eelgrass (*Zostera noltii*) occurs near the south-eastern corner of the bay.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Sanderling and Bar-tailed Godwit. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

Drumcliff Bay SPA is of importance as it supports nationally important populations of two species of wintering waterfowl: Sanderling (237) and Bar-tailed Godwit (336) – all figures are four year mean peaks for four of the five winters between 1995/96 and 1999/2000.

Other species that occur regularly include Whooper Swan (45), Light-bellied Brent Goose (74), Shelduck (75), Wigeon (138), Teal (57), Long-tailed Duck (14), Red-breasted Merganser (20),

Great Northern Diver (13), Oystercatcher (356), Ringed Plover (139), Lapwing (155), Knot (107), Dunlin (559), Curlew (177) and Redshank (138).

Drumcliff Bay SPA is of national importance for its winter populations of Sanderling and Bar-tailed Godwit, and the site supports a good diversity of other waterfowl species. Of note is that three of the species which occur regularly (Whooper Swan, Great Northern Diver and Bar-tailed Godwit) are listed on Annex I of the E.U. Birds Directive. Part of Drumcliff Bay SPA is a Wildfowl Sanctuary

5.4. Qualifying Interests of the Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC – Screened Out

Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC is a complex and varied site. Certain qualifying interests of these sites will not be potentially impacted upon from this proposed development, either due to the distance involved or because they are features that are outside of the Zone of Influence of the site. These features and the reason for their screening out are listed in Table 2. In considering these QI features, the SSCOs of the site were referred to, along with the most recent Article 17 Reports on the status of protected habitats and species in Ireland (NPWS, 2019).

Table 2 – The Qualifying Interests of the Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC (Screened Out)

Designated Feature & Code	**Rationale for Screening Out**
Estuaries 1130 Embryonic shifting dunes 2110 Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes') 2120 *Fixed coastal dunes with herbaceous vegetation ('grey dunes') 2130 *Juniperus communis* formations on heaths or calcareous grasslands 5130 Semi-natural dry grasslands and scrubland facies on calcareous substrates *(Festuco-Brometalia)* (*important orchid sites) 6210 Petrifying springs with tufa formation (Cratoneurion)* 7220	This habitat is not present within or adjacent to the proposed application site. There will be no loss or fragmentation of this habitat within the SAC, and significant effects upon it can be ruled out.
Narrow-mouthed Whorl Snail (*Vertigo angustior*) 1014	This species is not present within or adjacent to the proposed application site. There will be no loss or fragmentation of the habitat within the SAC, and significant effects upon it can be ruled out.

Designated Feature & Code	Rationale for Screening Out
Sea Lamprey (*Petromyzon marinus*) 1095 River Lamprey (*Lampetra fluviatilis*) 1099	This species is not present within or adjacent to the proposed application site. There will be no loss or fragmentation of the habitat within the Garavogue River, Lough Gill tributaries or SAC, and significant effects upon it can be ruled out. There will be no barriers to migration as a result of this development.

5.5. Qualifying Interests of the Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC – Screened In

Table 3 describes the qualifying interest of the Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC that have the potential to be impacted upon from the proposed development, i.e., these QIs have been screened in and potential effects have been considered in terms of the SSCOs that have been set.

Table 3 – The Qualifying Interests of the Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC (Screened In)

Designated Feature & Code	Rationale for Screening In
Mudflats and sandflats not covered by seawater at low tide 1140	This habitat has direct hydrological connectivity downstream of the site, as such the SSCOs of this habitat will be considered in detail and mitigation measures outlined to protect this habitat.
Harbour Seal (Phoca vitulina) 1365	A harbour seal breeding site is recorded 1.6km downstream of the application site, as such the SSCOs of the Harbour Seal will be considered further.

5.5.1. SSCOS of the Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC QI (Screened In)

Site specific conservation objectives for this site were prepared in 2024 (NPWS, 2024). These SSCOs can be downloaded on the NPWS website: (https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000627.pdf). These SSCOs are outlined in Tables 4 & 5.

Mudflats and sandflats not covered by seawater at low tide [1140]

The SSCO for this habitat is to maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide [1140] in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, which is generally defined by the following list of attributes and targets:

Table 4 - Mudflats and sandflats not covered by seawater at low tide (1140)

Attribute	Measure	Target
Habitat area	Hectares	The permanent habitat area is stable or increasing, subject to natural processes
Community extent	Hectares	Maintain the extent of the *Zostera*-dominated community and the Mytilidae-dominated community complex, subject to natural processes
Community structure: *Zostera* density	Shoots/m^2	Conserve the high quality of the *Zostera*-dominated community, subject to natural processes
Community structure: *Mytilus edulis* density	Individuals/m^2	Conserve the high quality of the Mytilidae-dominated community complex, subject to natural processes
Community distribution	Hectares	Conserve the following community types in a natural condition: Intertidal fine sand with *Peringia ulvae* and *Pygospio elegans* community complex; Estuarine mixed sediment to sandy mud with *Hediste diversicolor* and *oligochaetes* community complex; Fine sand with crustaceans and *Scolelepis* (*Scolelepis*) *squamata* community complex; Fine sand with *Angulus* spp. and *Nephtys* spp. community complex.

Harbour Seal *Phoca vitulina* [1365]

The SSCO for this species is to maintain the favourable conservation condition of Harbour Seal *Phoca vitulina* [1365] in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, which is generally defined by the following list of attributes and targets:

Table 5 – Harbour Seal Phoca vitulina (1365)

Attribute	Measure	Target
Access to suitable habitat	No. of artificial barriers	Species range within the site should not be restricted by artificial barriers to site use.
Breeding behaviour	Breeding sites	Conserve the breeding sites in a natural condition.
Moulting behaviour	Moult haul-out sites/m^2	Conserve the moult haulout sites in a natural condition. S
Resting behaviour	Resting haul-out sites	Conserve the resting haulout sites in a natural condition
Disturbance	Level of impact	Human activities should occur at levels that do not adversely affect the harbour seal population at the site

5.6. Qualifying Interests of the Drumcliff Bay SPA – Screened In

Table 6 describes the qualifying interest of the Drumcliff Bay SPA that have the potential to be impacted upon from the proposed development, i.e., these QIs have been screened in and potential effects have been considered in terms of the SSCOs that have been set.

Table 6 – The Qualifying Interests of the Drumcliff Bay SPA (Screened In)

Designated Feature/ Species & Code	Rationale for Screening Out
Wetland A999	Due to the proximity of this habitat downstream of the proposed application site, significant effects due to a deterioration in water quality cannot be ruled out.
Sanderling (*Calidris alba*) A144 Bar-tailed Godwit (*Limosa lapponica*) A157	This species is not present within or adjacent to the proposed application site. However, a change in water quality may affect the prey of this species and the increased local population may lead to an increase in disturbance from walkers and human recreational activities. As such the SSCOs of the species will be considered.

Wetlands [A999]

The SSCO for this habitat is to maintain the favourable conservation condition of Wetlands [A999] in Drumcliff Bay SPA, which is generally defined by the following list of attributes and targets:

Table 7 – Wetlands (A999)

Attribute	Measure	Target
Habitat area	Hectares	The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 1843 hectares, other than that occurring from natural patterns of variation

5.6.1. SSCOS of the Drumcliff Bay SPA QI (Screened In)

Site specific conservation objectives for this site and the conservation supporting document V1 were prepared in 2013 (NPWS, 2013). These SSCOs can be downloaded on the NPWS website:

(https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004013.pdf). These SSCOs are outlined in Tables 7 - 9.

Sanderling (*Calidris alba*) [A144]

The SSCO for this species is to maintain the favourable conservation condition of Sanderling (*Calidris alba*) [A144] in Drumcliff Bay SPA, which is generally defined by the following list of attributes and targets:

Table 8 – Sanderling (Calidris alba) (A144)

Attribute	Measure	Target
Population Trend	% change	Long term population trend stable or increasing
Distribution	Range, timing and intensity of use	No significant decrease in the range, timing or intensity of use of areas by sanderling, other than that occurring from natural patterns of variation

Bar-tailed Godwit (*Limosa lapponica*) [A157]

The SSCO for this species is to maintain the favourable conservation condition of Bar-tailed Godwit (*Limosa lapponica*) [A157] in Drumcliff Bay SPA, which is generally defined by the following list of attributes and targets:

Table 9 – Bar-tailed Godwit (Limosa lapponica) (A157)

Attribute	Measure	Target
Population Trend	% change	Long term population trend stable or increasing
Distribution	Range, timing and intensity of use	No significant decrease in the range, timing or intensity of use of areas by bar-tailed godwit, other than that occurring from natural patterns of variation

5.7. Potential Significant Effects

5.7.1. Introduction

This section will establish whether the impacts of the proposed development at the Cullagh More site that were identified in the previous section, are likely to occur and whether they are significant. The identification of potential impacts and the assessment of their significance typically requires the identification of the type and magnitude of the impacts; whether impacts will be short term or long term, direct, indirect or cumulative and will they occur during construction or operation. These potential impacts will be examined with respect to the conservation objectives of the Natura 2000 site identified.

In the screening section of this report, the following possible future impacts on the Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC and Drumcliff Bay SPA, were listed. These concerns are again listed below, and they will be dealt with in more detail in this section.

1. Deterioration of water quality in designated areas resulting from pollution from surface water run-off during site preparation and construction.

2. Deterioration of habitat in designated areas during the operation of the site.

3. Cumulative impacts with other proposed/existing developments.

5.7.2. Deterioration in Water Quality in the SAC/SPA During Installation

The proposed development will involve the excavation of soil and pouring of concrete. Any additional surface water run-off, due to the construction works of the proposed works, has some limited potential to have a negative impact on the water quality downhill of the site in the Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC. The development must be constructed and operated in accordance with best practice guidelines and follow recommended mitigation advice listed in Section 6.

5.7.3. Deterioration in habitat in the SAC/SPA Post Construction / Operation

Negative impacts upon water quality in the Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC and Drumcliff Bay SPA arising from the operation of the site have also been considered. The wastewater is to be directed to an existing sewer system. It is considered unlikely that the additional loading on the local WWTP will negatively affect the QI's of the SAC or SPA.

5.7.4. Cumulative impacts with other proposed/existing developments

This section of the NIS examines whether any other plans or projects have the potential to act cumulatively or in-combination with the proposed development to adversely affect the integrity of the Natura 2000 site identified.

In-combination effects may arise from the development of other projects in the vicinity of the site, such as construction of housing, roads, rail, water and wastewater infrastructure, gas, electricity, provision of tourism facilities and telecommunications infrastructure, however, the in-combination effects of other developments would depend on factors such as the distance in relation to the site, the scale and the characteristics e.g. the types and quantities of emissions.

In the past 10 years there have been 4 applications for planning permission approved within the local area. Given the scale of the development within the Carney Village, an additional 69 houses in the area should not significantly increase the human activity of the area as to negatively impact the designated sites in close proximity.

Finally, the Sligo County Development Plan, 2022-2028 has been reviewed and considered for possible in-combination effects with the proposed project.

With the implementation of the mitigation measures that are included as part of this NIS, the proposed development will not lead to cumulative impacts upon any designated site when considered in combination with other developments that have been properly screened for AA, or where an NIS was submitted.

Any future application in the area that has the potential to impact upon these Natura 2000 sites will be subjected to Appropriate Assessment as required under Articles 6(3) of the Habitats Directive. Following mitigation, this current development will have no cumulative impacts upon the SAC identified when considered in combination with any other development that has been screened for no impacts themselves (Stage 1) or where potential impacts have been mitigated against (Stage 2 AA / NIS).

6. Mitigation Measures

To protect Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC and Drumcliff Bay SPA and to avoid any reductions in water quality in the area surrounding the proposed development site, several

site-specific mitigation measures have been recommended, and these must be implemented and followed.

The implementation of these measures will ensure the protection of Natura 2000 habitats and species, and the local non-designated ecological receptors. The primary parties responsible for the implementation of these measures include the applicants, the project manager and the construction contractors.

Additional measures have also been suggested that will help to protect the local biodiversity of the surrounding area and to ensure the protection of local wildlife.

6.1. General Good Practice and Initial Works

- Site preparation and construction must be confined to the development site only and it must adhere to all the mitigation measures outlined in this NIS. Work areas should be kept to the minimum area required to carry out the proposed works and the area should be clearly marked out in advance of the proposed works.
- Upon appointment of the construction contractor, this team will also be made aware of the sensitivity of the site and the mitigation measures required to protect habitats, groundwater and surface water quality. All measures will be undertaken from initial site works until the completion of all construction and landscaping works on site.
- Prior to the commencement of developments on site, the site engineer and the contractors must be made aware of the ecological sensitivity of the site and its proximity and connection to the Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC and Drumcliff Bay SPA.
- Guidelines in the following best practice documents should be adhered to:
    - Construction Industry Research and Information Association (CIRIA) (2005) Environmental Good Practice on Site (C692)
    - Construction Industry Research and Information Association (2001) Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors (C532)
    - Construction Industry Research and Information Association (2000) Environmental Handbook for Building and Civil Engineering Projects (C512)
    - Environmental Protection Agency (2015) List of Waste and Determining if Waste is Hazardous or Non-Hazardous
    - Environment Agency et al. (2015) Guidance on the Classification and Assessment of Waste, Technical Guidance WM3.

6.2. Protection of Terrestrial Habitats and Features

- In accordance with the policies and objectives of the Regional and County Development Plans, the existing green infrastructure (GI) of the site, i.e., the treelines and hedgerows, should be incorporated into the development in so far as possible.
- In order to prevent damage to treelines / hedgerows in the site that are to be retained, then protective barrier fencing should be erected prior to the commencement of site clearance

works. This fencing should be erected just beyond the crown of the largest tree and this will incorporate the Root Protection Zone (RPA) of the trees to be retained. There must be no dumping or storage of construction waste or machinery in this zone during construction.

- All new underground services such as water, foul water and electricity should be routed away from the RPAs of trees to be retained.
- All exposed roots and/or soil profiles containing roots of trees to be retained should be kept damp in dry conditions by regular watering and by covering with a double layer of hessian fabric to prevent desiccation. Backfill should be of good quality topsoil, structural soil or clean sand.
- Where machinery access has to encroach the RPAs of the trees to be retained for reasons unforeseen and unavoidable; suitable ground protection should be put in place to prevent any significant soil compaction or root damage near the trees; this should take the form of suitable strength ground protection mats or cellular confinement system capable of supporting the appropriate weight.
- Where it is deemed absolutely necessary to remove trees within the treelines, then trees should be checked for the presence of bat roosts in the 24 hour period prior to removal. Where it is deemed necessary to remove any tree, it must only be done outside of the bird nesting season (March – August).

6.3. Management of Construction Waste and Soil

- All construction waste must be removed from site by a registered contractor to a registered site. Evidence of the movement and safe disposal of the construction waste must be retained and presented to Local Authority upon request.
- The applicants and construction contractors will be responsible for the safe removal of any construction waste generated on site. There must be no disposal of construction waste or topsoil in any designated site.
- All topsoil generated from site works should be stored within the application site until it is required for landscaping. It must not be stored outside the site boundaries, and it must not be used for the infilling of any area outside of the site. It must be stored at appropriate locations within the site, away from the drainage ditch on the east of the site.
- If there is more topsoil than is needed for landscaping, it must be removed from site by a registered contractor for appropriate use elsewhere. The end location of the topsoil must be identified, and records presented to the local authority if requested.

6.4. Protection of Water Quality and Management of Pollutants

- Efficient construction practices and sequences should be employed on site, and this will minimise soil erosion and potential pollution of local watercourses with soil and sediment.
- Unnecessary clearance of vegetation should be avoided and only areas necessary for building works should be cleared. The retention of these areas will also help retain storm water run-off from the site during construction and operation.
- Works within the site should be avoided during periods of heavy rainfall.

- It is vital that there is no deterioration in water quality in the nearby watercourses. This will protect both habitats and species that are sensitive to pollution. Therefore, strict controls of erosion, sediment generation and other pollutants associated with the installation process should be implemented, including the provision of attenuation measures, silt traps or geotextile curtains to reduce and intercept sediment release into any local watercourses.
- The construction team must implement the following site-specific mitigation measures, and these measures must be incorporated into a Construction and Environment Management Plan.
- Surface water from the construction site should be managed using a system of temporary on-site attenuation features, and these should be fitted with silt barrier devices such as silt fences or silt busters
- Silt fences and berms should be installed prior to the commencement of construction on site.
- The silt fences should be sturdy and constructed of a suitable geotextile membrane to ensure that water can pass through, but that silt will be retained. An interceptor trench will be required in front of this interceptor fence. The silt fence must be capable of preventing particles of 425μm from passing though
- The silt fences should be monitored daily to ensure that they remain functional throughout the construction of the proposed development. Maintenance of the fences should be carried out regularly. Fences should be inspected thoroughly after periods of heavy rainfall.
- Discharge water generated during laying on concrete should be removed off site for treatment and disposal
- Best practice concrete / aggregate management measures must be employed on site (these measures should be included where possible on a site plan). These will include:

    - Best practice in bulk-liquid concrete management should be employed on site addressing pouring and handling, secure shuttering, adequate curing times etc.
    - A designated concrete wash out area should be set up on site; typically, this will involve washing the chutes, pumps into a designated IBC before removing the waste water off site for disposal. These procedures should be covered during a Site Safety & Environmental Induction session.
    - Stockpile areas for sands and gravel must be kept to a minimum size, well away from the drains (minimum 50m).
    - Where concrete shuttering is used, measures must be put in place to prevent against shutter failure and control storage, handling and disposal of shutter oils.
    - Activities which result in the creation of cement dust must be controlled by dampening down the areas.
    - Raw and uncured waste concrete must be disposed of by removal from the site;
    - Stockpile areas for sands and gravel will be kept to a minimum size, well away from the adjacent ditch to the east of the site.

- The following pollution control measures must also be employed on site (the location of these areas/measures must be provided on a site plan):

- Daily plant inspections must be completed by all plant operators on site to ensure that all plant is maintained in good working order. Where leaks are noted on these inspection sheets, the plant must be removed from operations for repairs as pollution control measures.
- A dedicated re-fuelling location must be established on site, and this must be situated away from any watercourse on site.
- Spill kits stations must be provided at the fuelling location for the duration of the works.
- Staff must be provided with training on spill control and the use of spill kits.
- All fuel storage containers must be appropriately bunded, roofed and protected from vehicle movements. These bunds will provide added protection in the event of a flood event on site.
- All chemicals must be stored as per manufacturer's instructions. A dedicated chemical bund will be provided on site.
- Storage of fuel, and servicing and refuelling of equipment or machinery must be at least 20m from ground clearance or rock-breaking activities.
- The dedicated refuelling area must be underlain by concrete hard standing. All fuel and oil tank should be inspected on a regular basis for signs of spillages, leaks and damage during use. A record of these inspections must be kept, and any improvements needed be carried out immediately.
- The risk of fuel spillages on a construction site is at its greatest when refuelling plant. Therefore, only designated trained and competent operatives should be authorised to refuel plant on site. Plant and equipment should be brought to a designated refuelling area rather than refuelling at numerous locations about the site.
- Chemicals used on site must be returned to the site compound and secured in a lockable and sealed container overnight in proximity to the fuel storage area.
- Drip trays must be utilised on site for all pumps situated within 20m away from ground clearance areas.
- Procedures and contingency plans must be established on site to address cleaning up small spillages as well as dealing with an emergency incident. A stock of absorbent materials such as sand, spill granules, absorbent pads and booms must be kept on site, and at the refuelling area.
- All personnel should observe standard precautions for handling of materials as outlined in the Safety Data Sheets (SDS) for each material, including the use of PPE. Where conditions warrant, emergency spill containment supplies should be available for immediate use.

6.5. Protection of Birds

- The removal of any vegetation should be done outside of the bird nesting season (March to August). This includes any sections of hedgerows, treelines and scrub as well as the grassland habitats in the centre of the site that might be used as a habitat for ground nesting birds that might breed on site. If grassland vegetation needs to be removed within the bird nesting

season to facilitate initial works on the site, the ECoW must survey the area to be cleared prior to removal to check for the presence of nesting ground dwelling birds.

- To ensure that impacts on protected bird species that might use the habitats close to the site do not arise from the noise generated on site, measures to control noise on site must be undertaken. The construction plant and tools used on-site must comply with the relevant Irish regulations in relation to noise and vibration requirements. In particular, it is recommended that all equipment used on site are newer models equipped with noise dampening systems and that the equipment is maintained in good condition and serviced regularly. Site management must also ensure that each item of plant and equipment complies with the noise limits quoted in the relevant European Commission Directive 2000/14/EC. All plant and equipment should be fitted with appropriate mufflers or silencers of the type recommended by the manufacturer. Only plant and equipment that has been designed for that task should be used and all equipment should be shut down or set to minimum when not being used.

6.6. Protection of Bats and other Mammals

- All mature trees must be assessed by a bat specialist prior to felling.
- Lighting should be kept to a minimum around the remaining trees on the site. No light should fall on the trees from street lighting or private houses. Guidelines from Bat Conservation Ireland will be provided for considering how to avoid light pollution of the hedgerows to allow for feeding, commuting and roosting.
- Lighting shall be controlled to avoid light pollution of green areas and shall be targeted to areas of human activity and for priority security areas. Motion-activated sensor lighting is preferable to reduce light pollution. None of the remaining mature trees or trees proposed for planting shall be illuminated.
    - Dark corridor for movement of nocturnal species along the grounds of the site. Lighting shall be directed downwards away from the treetops and shall not illuminate the eastern boundary vegetation.
    - All luminaires shall lack UV elements when manufactured and shall be LED
    - A warm white spectrum (ideally <2700 Kelvin) to reduce blue light component
    - Luminaires shall feature peak wavelengths higher than 550nm
    - Tree crowns shall remain unilluminated
    - Planting shall provide areas of darkness suitable for bats to feed and commute

6.7. Biodiversity Enhancement and Management

- The treeline and adjacent wet grassland that remains undeveloped in the eastern section of the site should remain undisturbed. It is recommended that this area is not landscaped but that it is left with its existing natural vegetation. This will provide the optimal situation for maintaining biodiversity in the site. This area of the site is quite wet and so it provides an important ecosystem service in terms of flood control for the area.
- Management of this area should allow for maintaining the current ground flora of the area, as well as allowing for the provision of dead wood and natural senescence. Management of the

strip should include lack of fertilisation with a low frequency cutting regime in late summer. Following mowing, it is recommended that the grass is left for two days for seed to fall before being removed offsite for composting. It is anticipated that in time this low intensity management will allow a more biodiverse grassland habitat to emerge that will provide significant benefit to pollinators.

- Bat boxes should be provided to compensate for the potential loss of roost sites from tree removal. 6 x 2F Schwegler bat boxes are recommended for erection along the treeline to the east or alternatively, access could be provided for bats to certain elements of the buildings. All boxes should be away from illumination.
- The final landscaping of the site offers the potential for biodiversity enhancements within the site as well as providing play areas for children and green amenity areas for all ages. Future landscaping of the site should adhere to the following recommendations:

    - Where possible the importation of topsoil from outside the area should be avoided;
    - A proportion of the grassland / parkland habitats within the site should be managed through methods that mimic traditional grassland management (low level mowing regimes). This will benefit local pollinators. Locally sourced wildflower seed would also be beneficial;
    - When planting flowers, shrubs and trees native species should be used, ideally from a local source;
    - Garden plants that have the potential to become invasive must be avoided.
    - It is recommended that Irish provenance native planting is used in the landscaping.
    - A wildlife pond can be incorporated into the surface water management plan. This area should be appropriately fenced for public safety while allowing the movement of wildlife to and from the water source

- A full Biodiversity Net Gain plan is included with the EcIA in this application and all measures should be included into the design and ongoing management plan.

7. Appropriate Assessment Conclusion

This current NIS has been undertaken to evaluate the potential impacts of the proposed development regarding the effects upon the conservation objectives and qualifying interests (including the habitats and species) of the Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC and Drumcliff Bay SPA. It is considered that following mitigation, that the proposed project does not have the potential to significantly affect the conservation objectives of these Natura 2000 sites, and the integrity of these sites will not be adversely impacted.

The qualifying interests of the site and their potential to be impacted upon from the potential development were listed in Section 5. It is considered that these potential impacts can be successfully mitigated against. With implementation of the mitigation measures there will be no deterioration in water quality or impacts upon any designated habitat or any species dependent on

these designated habitats. The integrity of these sites will not be adversely affected. Table 7 follows the integrity of the SAC / SPA checklist, which shows that the integrity of the site would not be affected by the proposed development.

Table 10 – Integrity of Site Checklist (From NPWS, Information Checklist for AA, Box 6, EC (2002)

Conservation Objective: Does the project have the potential to:	**Yes / No**
Cause delays in progress towards achieving the conservation objectives of the site?	N
Interrupt progress towards achieving the conservation objectives of the site?	N
Disrupt those factors that help to maintain the favourable conditions of the site?	N
Interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site?	N
Other Objectives: Does the project have the potential to:	**Yes / No**
Cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a habitat or ecosystem?	N
Other Objectives: Does the project have the potential to:	**Yes / No**
Change the dynamics of the relationships (between, for example, soil and water or plants and animals) that define the structure and/or function of the site?	N
Interfere with predicted or expected natural changes to the site (such as water dynamics or chemical composition)?	N
Reduce the area of key habitats?	N
Reduce the population of key species?	N
Change the balance between key species?	N
Reduce diversity of the site?	N

Result in disturbance that could affect population size or density or the balance between key species?	N
Result in fragmentation?	N
Result in loss or reduction of key features (e.g. tree cover, tidal exposure, annual flooding, etc.)	N

Considering the above, it is deemed that with the implementation of the mitigation measures, that the proposed works do not have the potential to significantly affect the conservation objectives or qualifying interests of the Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC and Drumcliff Bay SPA or any other Nature 2000 site.

Catherine Howarth.
Consultant Ecologist.

Appendix 1

References

References and Further Reading

Bowers Marriott, B. (1997) Practical Guide to Environmental Impact Assessment: A Practical Guide. Published by McGraw-Hill Professional, 1997, 320 pp.

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EPA (2001) Parameters of Water Quality - Interpretation and Standards. Environmental Protection Agency, Ireland.

EPA (2002) Guidelines on the Information to be contained in Environmental Impact Statements. Environmental Protection Agency, Ireland.

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Fossit, J.A. (2000) *A Guide to Habitats in Ireland*. The Heritage Council, Kilkenny.

Institute of Environmental Assessment (1995) *Guidelines for Baseline Ecological Assessment*. Institute of Environmental Assessment, Great Britain.

IUCN (2003) *Red List of Threatened Species*. International Council for Conservation of Nature and Natural Resources.

Natura Environmental Consultants (2005) Draft Habitat Survey Guidelines: A Standard Methodology for Habitat Survey and Mapping in Ireland. The Heritage Council, Kilkenny.

NPWS (2019) The Status of EU Protected Habitats and Species in Ireland. Species Assessments Volume 3. Version 1.0. Unpublished Report, National Parks & Wildlife Services. Department of Arts, Heritage and the Gaeltacht, Meath, Ireland.

NPWS (various) – Documents relating to all Natura 2000 sites of Offaly Bay. All available online.

Appendix 2

Photo Plates

Plate 1 – Aerial photos of site facing north, east, south and west

Plate 2 – Aerial photos of grassland habitat